



Food and Agriculture  
Organization of the  
United Nations

# Enhancing soil governance: regional and national examples of soil legislation development

9<sup>th</sup> of March 2023

13:00 – 15:00 CET

Online Webinar

# The National Soil Strategy for Sustainable Agriculture

a Policy Instrument

Sol Ortiz, Blanca Prado

Umwelt  
Bundesamt



AGRICULTURA

SECRETARÍA DE AGRICULTURA Y DESARROLLO RURAL



PUEIS





# NATIONAL CONTEXT

## Agricultural soils



Mexico total territorial extension



**Pasture land:**  
~ 109 Mha

**(54.5%)**  
**Arable land:**  
~ 24 Mha (12%)

**Crop land:**  
~ 21 Mha



**Total population:**

**Per capita arable land**  
~ 0.19 ha



# NATIONAL CONTEXT

## Soil degradation

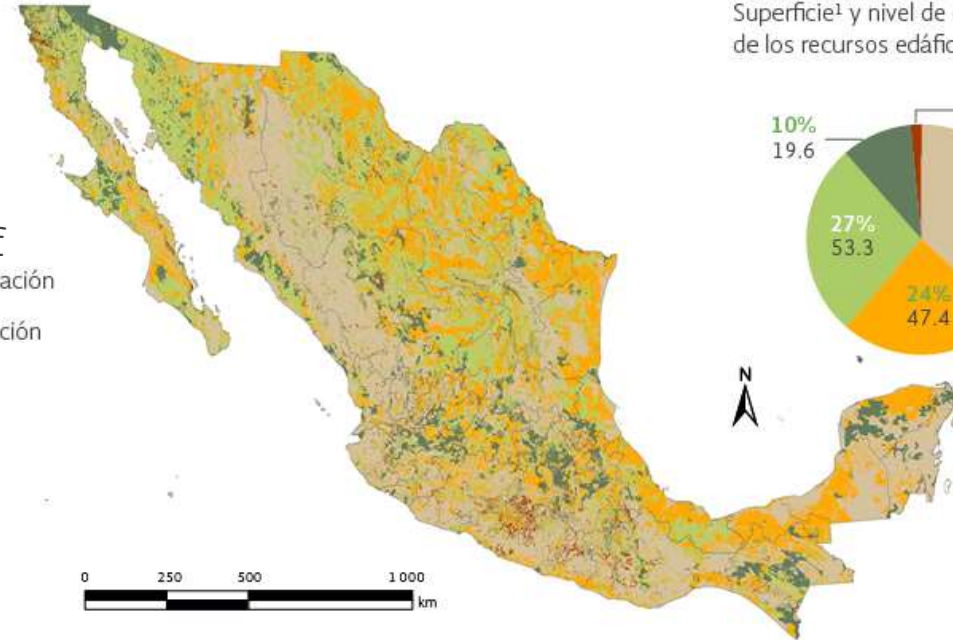


### Main threats to soil functions

#### Mexico:

- Erosion by wind and water
- Soil organic matter decline, loss of SOC
- Salinization and sodification,
- Nutrient imbalance
- **Loss of soil biodiversity**
- Compaction
- Soil contamination
- Waterlogging
- Acidification
- Sealing

Nivel de degradación



Nota:

<sup>1</sup> La superficie se muestra en porcentaje del territorio nacional y millones de hectáreas.

Fuente:

Elaboración propia con datos de:

Conafor, Semarnat y UACh. *Línea Base Nacional de Degradación de Tierras y Desertificación. Informe Final y Anexos I y II.* Conafor y UACh. México. 2013.



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# Sectorial programme 2020-2024



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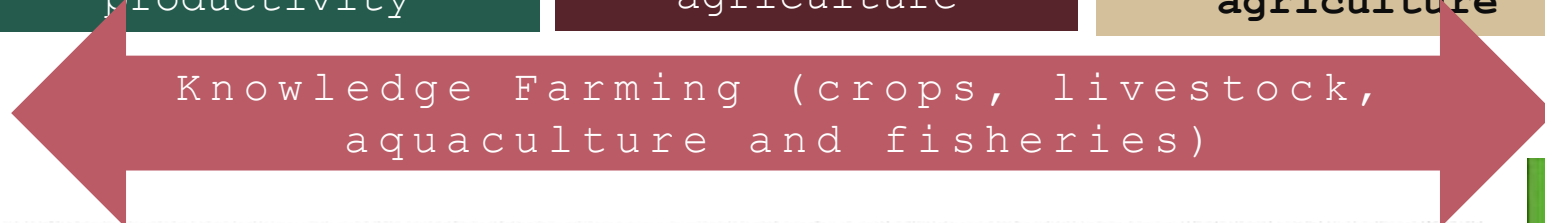
Transition to food food security, self-sufficiency with the sustainable increase in agricultural productivity, leaving no one behind.



Improve agricultural productivity

Sustainable agriculture

Inclusive agriculture



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**Priority Objective 3.** Increase sustainable production practices in the agricultural and aquaculture-fishing sector in the face of

**Priority strategy 3.1.** Implement a policy for the use, conservation and recovery of agricultural soil and water for the sustainability of natural

**3.1.2** Promote water capture, storage and harvesting **systems** and practices that **increase water availability**.

**3.1.4** **3.1.4** Contribute to the **conservation and restoration** of agroecosystems, **soils** and basins.

**3.1.5** Promote **soil conservation and restoration practices** to **improve fertility** and reduce erosion.

**3.1.6** Promote **soil use plans** according to water footprint criteria and available resources in territories and regions.

**3.1.7** Promote the use of soil improvers and **increase of organic matter** in agricultural soils, crop rotation and **inoculation of soils** with **microorganisms**.

**3.1.8** Promote the **incorporation** and use of **agricultural residues** and **avoid agricultural burning**.

**Priority strategy 3.2** Promote climate change adaptation and mitigation actions for comprehensive risk management.

**3.2.1** Strengthen the adaptation capacities and resilience of the sector to face multiple risks and those associated with climate change.

**3.2.2** Reduce the emission of greenhouse gases from agricultural and fishing activities.

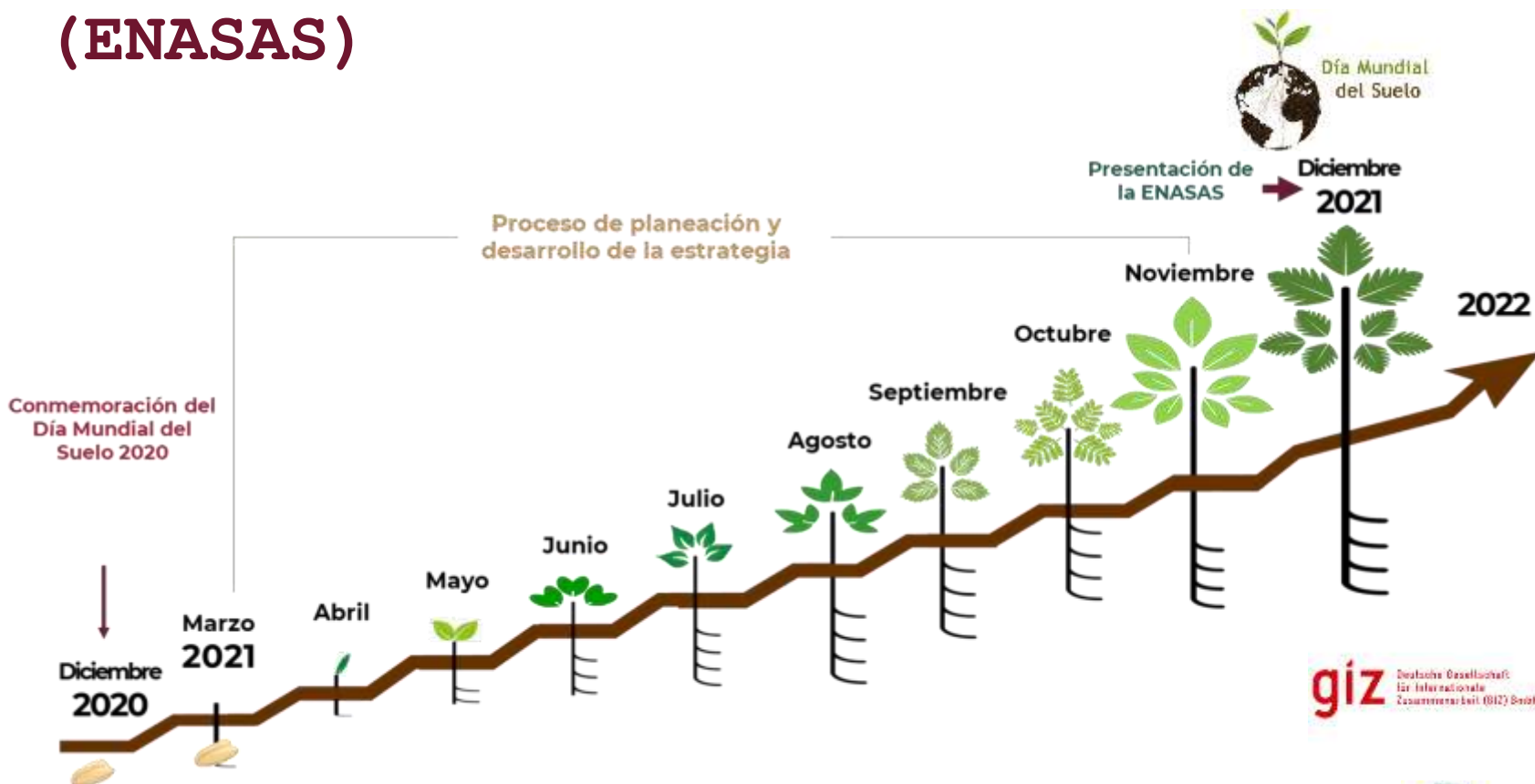
**3.2.3** Promote **sustainable production practices** for the **capture** and **storage** of **carbon in soils**.

**3.2.4** Promote access to compensation schemes for emissions avoided in agroforestry systems, communities, ejidos and economic organizations of producers in the sector.





# National Soil Strategy for Sustainable Agriculture (ENASAS)



[https://www.youtube.com/watch?v=iMnFNe\\_dR3E&t=4344s](https://www.youtube.com/watch?v=iMnFNe_dR3E&t=4344s)



# Consultation processes



1<sup>st</sup> Stage February-March, 2022

362 participants



Government



Academy



CSO



Private Sector



CGDR  
Sistema de Información Científica y Tecnológica del Sector Agroalimentario Mexicano



Farmers



Technicians

136  
Researchers  
58  
Institutions

1. Research
2. Sustainable management and soil restoration
3. Promotion of sustainable practices

4961  
participants

2<sup>nd</sup> Stage  
June-July

83  
researchers

Research

1. Biofertilizers
2. Soil and water
3. Sustainable soil management

Knowledge farming

3<sup>rd</sup> Stage Sept- Dec 2022

Main challengers and needs:

1. Fertility loss
2. Erosion
3. Sealing
4. Salinity
5. Acidity

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# Publication in the National Official Journal



**AGRICULTURA**

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DOF: 28/07/2022

## **ACUERDO por el que se presenta la Estrategia Nacional de Suelo para la Agricultura Sostenible.**

**Al margen un sello con el Escudo Nacional, que dice: Estados Unidos Mexicanos.- AGRICULTURA.- Secretaría de Agricultura y Desarrollo Rural.**

VÍCTOR MANUEL VILLALOBOS ARÁMBULA, Secretario de Agricultura y Desarrollo Rural, con fundamento en los artículos 25 y 27, fracción XX, de la Constitución Política de los Estados Unidos Mexicanos; 2, fracción I, 26, y 35, fracción VIII y XII, de la Ley Orgánica de la Administración Pública Federal; 4 de la Ley Federal de Procedimiento Administrativo; 9, 12, 33, 34 y 35 de la Ley de Planeación; 1, 3, 8, 41, 53, 54, 55 fracciones V y VI, 56, 71, 83, 84, 86, 164, 165, 167, 171, 173, 176, 183 fracciones VI y VII, 190 fracción III de la Ley de Desarrollo Rural Sustentable; y 6 de la Ley Federal de Austeridad Republicana; 1, 2, 3, 4 y 5 fracción I del Reglamento Interior de la Secretaría de Agricultura y Desarrollo Rural.

### **CONSIDERANDO:**

Que la Ley Orgánica de la Administración Pública Federal y la Ley de Desarrollo Rural Sustentable, le confieren diversas atribuciones a la Secretaría de Agricultura y Desarrollo Rural, en materia de conservación y mejoramiento de los suelos agrícolas;

Que como parte de las facultades que tiene encomendada la Secretaría de Agricultura y Desarrollo Rural, se encuentran la organización y el fomento de las actividades agropecuarias, así como contribuir a la seguridad alimentaria, garantizando el abasto de productos básicos;

Que la Ley de Desarrollo Rural Sustentable establece que la Secretaría de Agricultura y Desarrollo Rural, como dependencia competente, en coordinación con los gobiernos de las entidades federativas y con la participación de los productores, impulsará obras de conservación de suelos;

[https://dof.gob.mx/nota\\_detalle.php?codigo=5659521&fecha=28/07/2022#gsc.tab=0](https://dof.gob.mx/nota_detalle.php?codigo=5659521&fecha=28/07/2022#gsc.tab=0)

<https://www.gob.mx/agricultura/documentos/estrategia-nacional-de-suelo-para-la-agricultura-sostenible-2022>



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# National Soil Strategy for Sustainable Agriculture

## Objetivo

Promote, strengthen and coordinated actions to increase the sustainable management of agricultural soils in the national territory



- Food security
- Well-being



- conservation of multiple soil functions
- restoration of degraded agricultural soils

ENASAS promotes education and social awareness about the importance of soil for life, with the participation of multiple actors, particularly local actors.



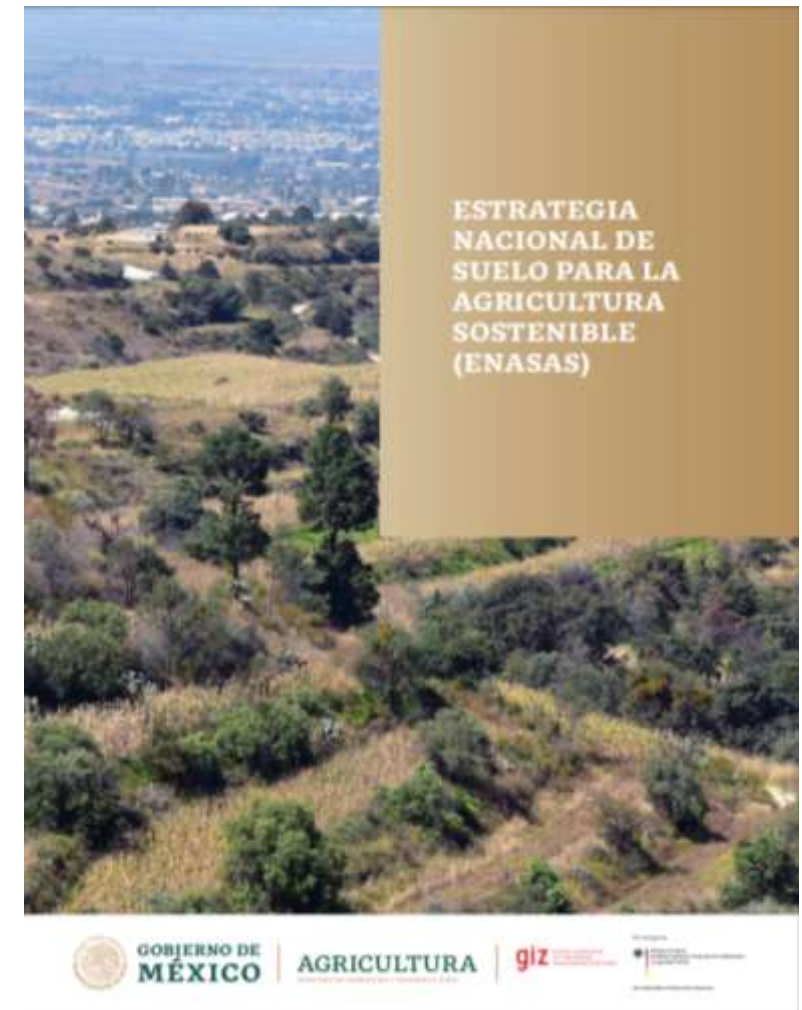
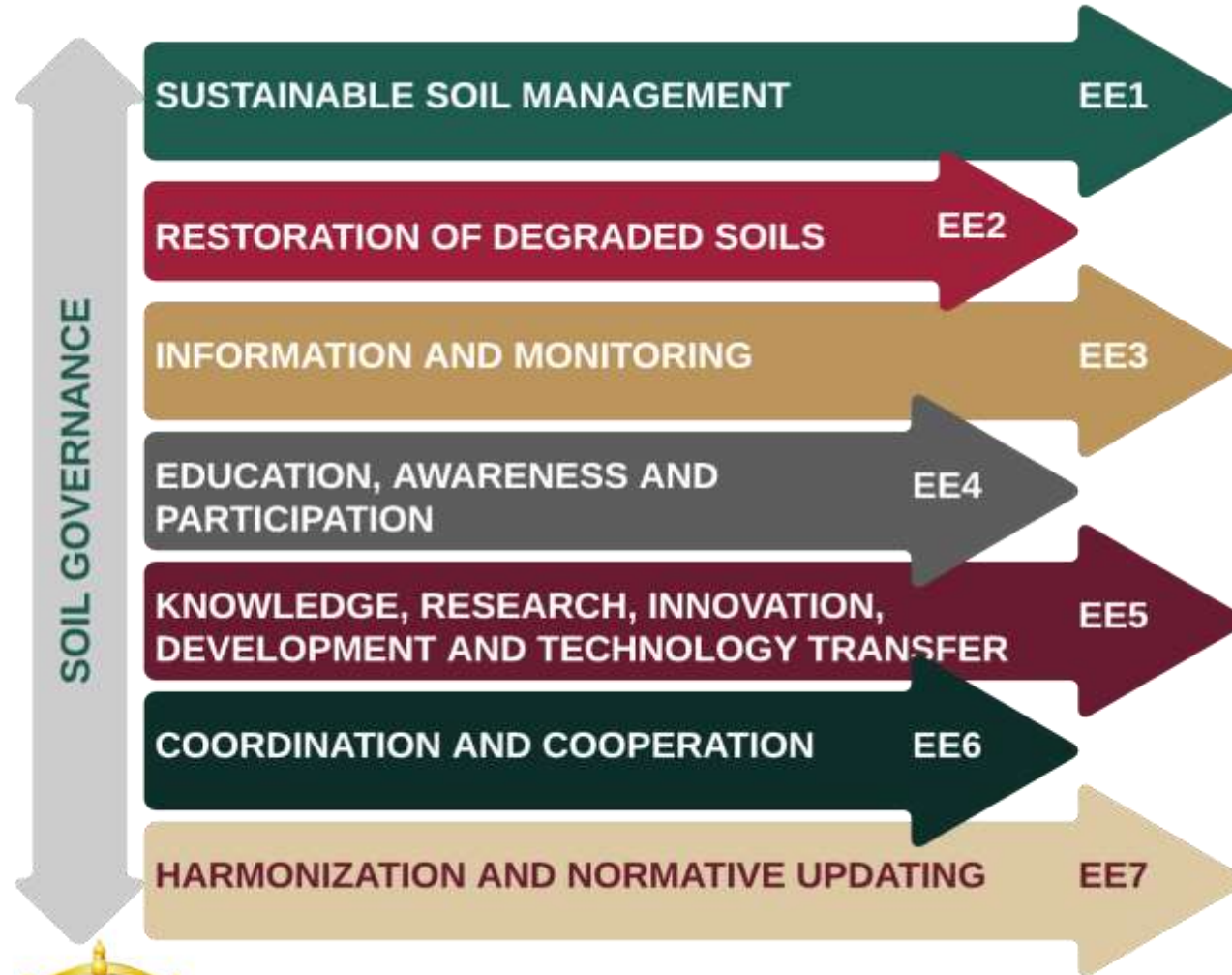
Promote the generation and integration of traditional and scientific knowledge in order to promote technological innovations adapted to different socio-ecological contexts, which meet the specific needs of the territories and populations in the country.



# National Soil Strategy for Sustainable Agriculture



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# ENASAS Components

**EE7:** Harmonize legal instruments on soil use



General Soil Law

**EE6:** Articulate ENASAS with multiple actors from all relevant sectors



Farmers

Technicians



Government



Academy



CSO



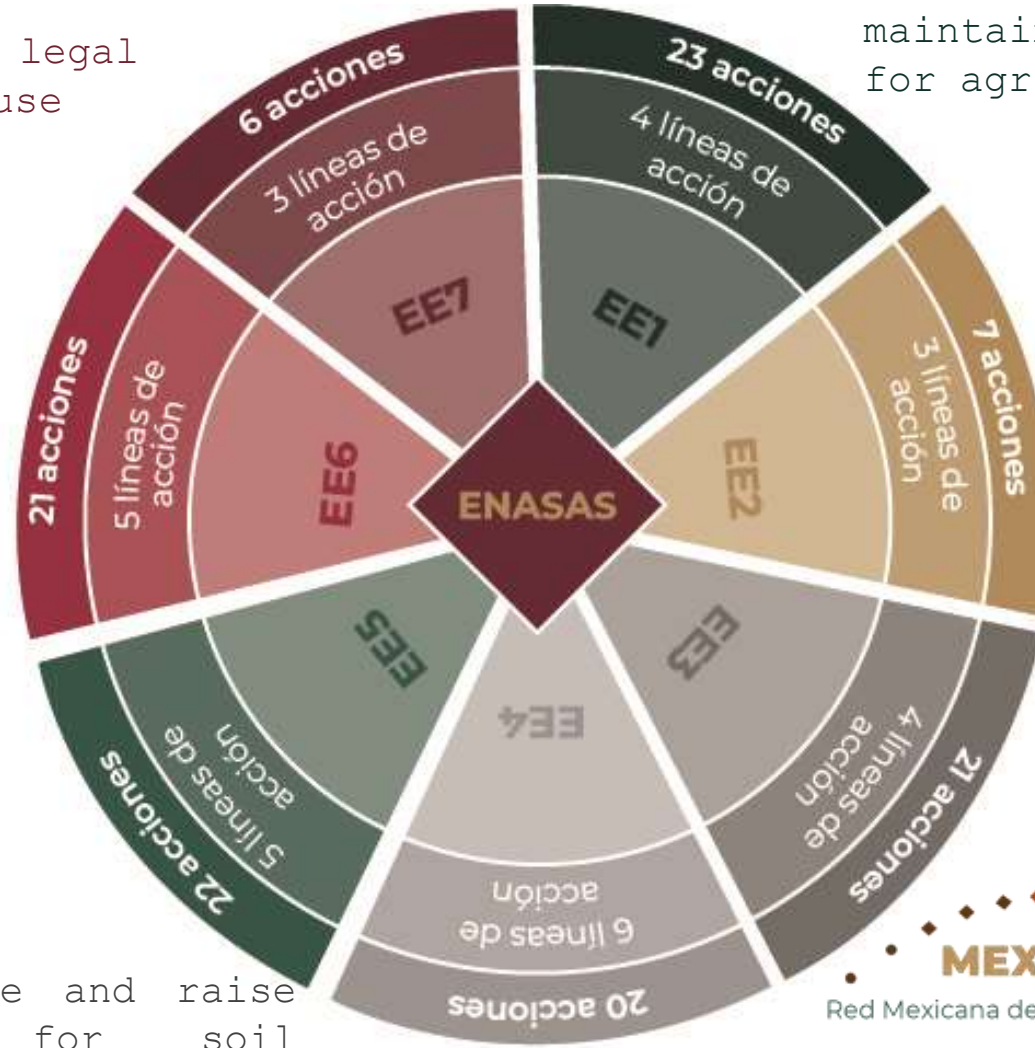
Private Sector



**EE5:** Promote technological scientific research and innovation and link it with traditional knowledge



**EE4:** Educate and raise awareness for soil conservation

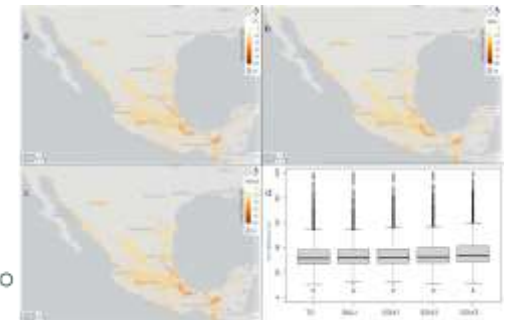


**EE1:** Preserve soil functions and maintain ES including provision for agriculture



**EE2:** Recover soil health and soil integral quality

**EE3:** Develop a monitoring system and harmonize laboratory analysis methods.



**MEXSOLAN**  
Red Mexicana de Laboratorios de Suelo

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# ENASAS goals

## Short term

### Immediate needs

Promote sustainable soil management for its conservation and

Promote awareness and education on the importance of the soil resource

## Medium term

### Strengthen the strategy

Generate and integrate knowledge and develop technological innovations

Build effective land governance through multi-stakeholder participation

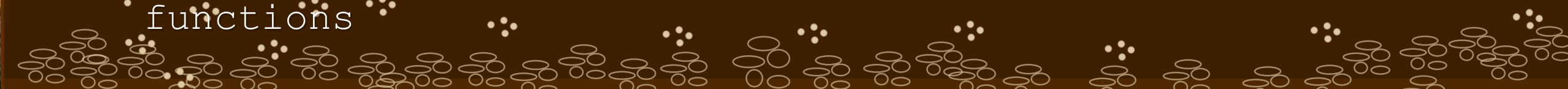
## Long term

### Road map

Promote the General Land Law

Restore degraded soils

Recover ecosystems soils functions



# Coordination mechanism with subnational governments for implementation of public policies

Sectorial Programme  
2020-2024

PLECCA

Specific Technical Execution  
Annex to promote sustainability  
and resilience to Climate  
Change in the agricultural  
sector 2022



ENASAS



Secretaría  
de Agricultura y  
Desarrollo Rural  
GOBIERNO DE MICHOACÁN

**SEDARH**  
SECRETARÍA DE DESARROLLO  
AGROPECUARIO Y RECURSOS  
HIDRÁULICOS  
SLP



GOBIERNO  
DE SONORA

- Soil Re-carbonization
- Public awareness and education
- Technical Accompaniment
- Soil Doctors Programme



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# Soil Doctors Programme

A farmer-to-farmer training programme to promote the practice of Sustainable Soil Management, and to cover the lack of extension services.



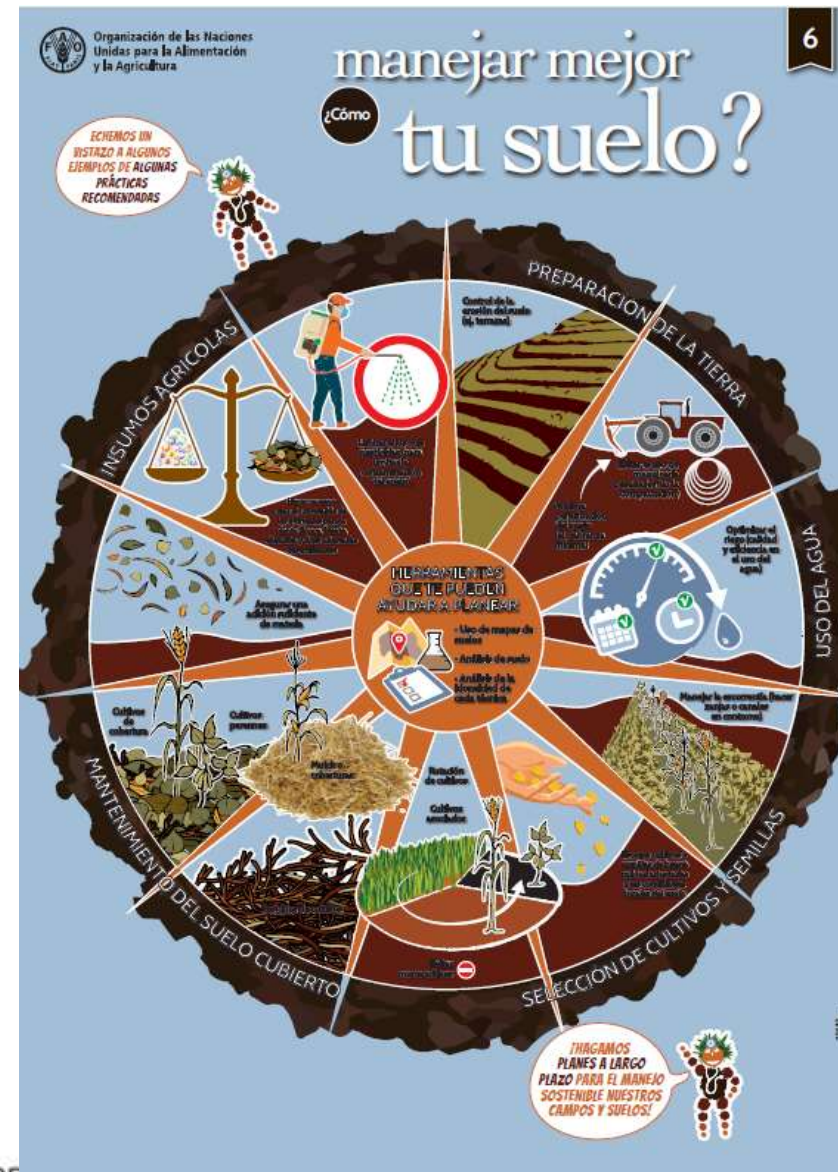
Pilot group México



Con el apoyo de



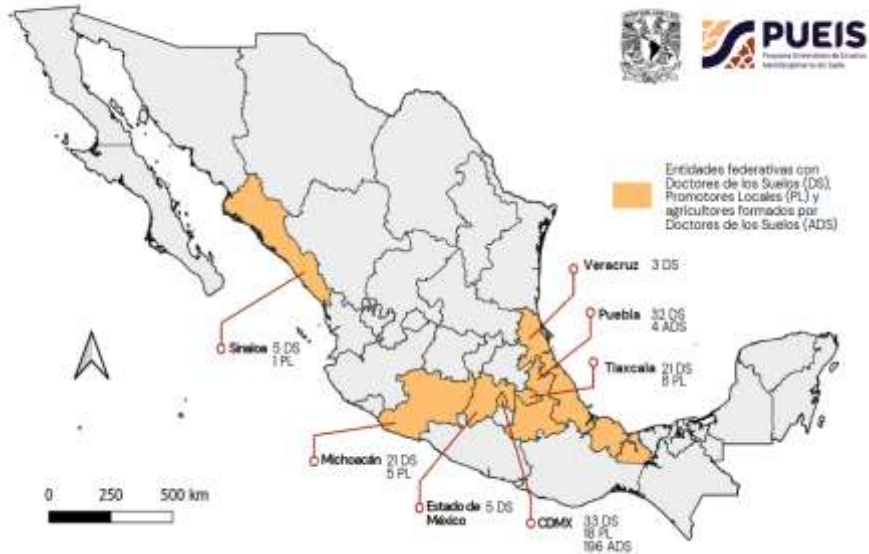
development





150 Soil Doctors trained  
 7 States of México

### Programa Doctores de los Suelos, México



### Strategies for scaling up the programme

Increase the actors : Universities, the private sector, farmers' associations.

Implement the SDP in other states



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# Conclusions

- At his moment, in Mexico, there is a solid academic platform dedicated to the study of soils, a government awareness to address the problem, and farmers with great interest in reversing the havoc that poor soil management has generated in their productive capacity
- ENASAS links institutions, instruments and norms related to soil management: what Mexico needs to achieve a real, fair, and sustainable management of the country's soils



# GRACIAS

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